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| Title | **Solar PV Fundamental** |
| Level | **2** | **Credits** | **5** |

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| Purpose | This competency standard is intended for those who carry out installation of off-grid solar PV system. People holding credit for this module are able to describe Solar PV basics (photovoltaic history and today’s market) and different types of solar PV cells, their characteristic and techniques (polycrystalline, monocrystalline and Thin Film)  |

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| Classification ISCED | 0713 Electricity and energy |

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| Available grade | Competent / Not yet competent |

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| Modification history | N/A |

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| **Competency Unit** | **Performance Criteria** | **Knowledge and Understanding** |
| **A1:****Basic concepts of solar PV system(History and today market)** | **P1-** Define the basic photovoltaic terms**P2-** Importance of renewable energy**P3-** Identify today’s needs of solar technology | **K1-** Semiconductor, diodes and their functions**K2-** Energy, kind of energy and sources of energy**K3- L**oad demand, loads heeding and solar technology |
| **A2:** **Types and characteristics of solar PV system** | **P1:** Identify and select solar cell **P2:** Plan and prepare for solar panel installation techniques**P3- I**dentify the types of photovoltaic cells**P4-** Measure the distance for solar array**P5 -** Estimate the solar power demand | **K1-** Identify the characteristics of different solar cells **k2-** Methods of solar cells manufacturing, materials and properties of materials **K3-** Mono technology, ploy technology and amphibious technology**K4-** Interpretation of drawing scale, basic measuring units and conversion of units**K5-** Calculation for energy and load demand |